

REMARKS

Reconsideration of the rejected claims in view of the following remarks is respectfully requested.

Summary of the Office Action

In the instant Office Action, the Examiner has rejected claims 7 – 16 over the art of record. By the present remarks, Applicant submits that the rejections have been overcome, and respectfully requests reconsideration of the outstanding Office Action and allowance of the present application.

Traversal of Rejection Under 35 U.S.C. § 103(a)

Applicant traverses the rejection of claims 7 – 16 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent US 5,058,646 issued to Kajikawa [hereinafter KAJIKAWA]. The rejection is respectfully traversed.

Independent Claim 7

Independent claim 7 recites, in pertinent part:

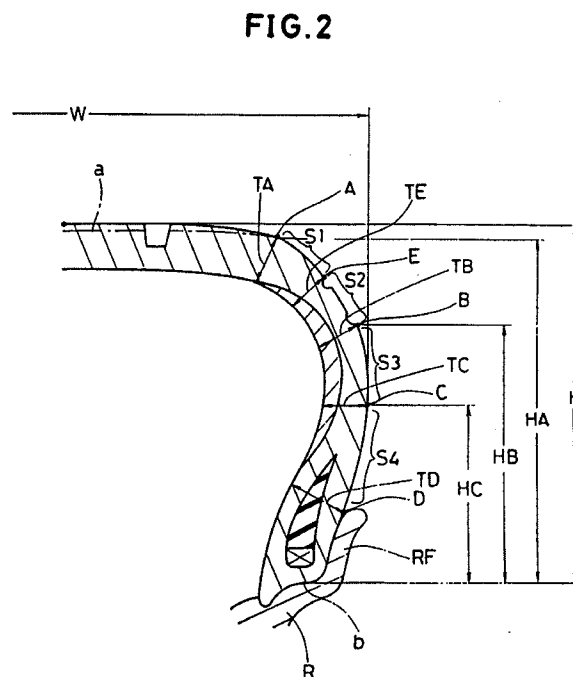
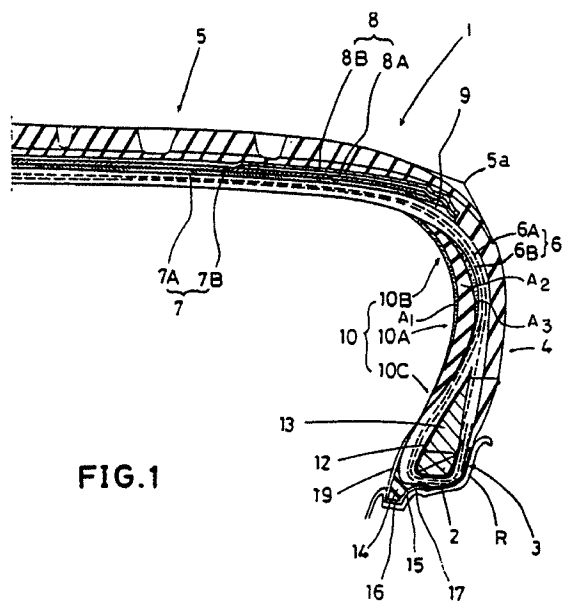
. . . at least one reinforcing profile, composed of a first elastomeric material and having a first crescent-shaped cross section, arranged in a region of each side wall and extending respectively at least over a large part of a side wall length; and

a core profile, composed of a harder material than the first elastomeric material and having a second crescent-shaped cross section, being enclosed in the at least one reinforcing profile.

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2142. Applicant submits that one of ordinary skill in the art would not modify the reference in the manner asserted.

KAJIKAWA generally discloses a pneumatic safety tire. More specifically, KAJIKAWA discloses a pneumatic safety tire in which each sidewall portion is provided with a minimum thickness at a position E between an outer edge point A and a 65% height point B both located on each side of the tire equator. The tire of KAJIKAWA is illustrated in Figures 1 and 2, which Applicant has reproduced below.



KAJIKAWA discloses at col. 4, line 41 – col. 5, line 13 (emphasis added):

In the present invention, the point resides in the optimum distribution of the overall thickness of the sidewall portions, inclusive of the above-mentioned carcass, rubber sidewalls and sidewall reinforcing layers.

Accordingly, as shown in FIG. 2, each sidewall portion has a minimum thickness at a position E between an outer edge point A and a 65% height point B both located on each of the sidewall portions, wherein the outer edge points A are defined as the axially outer edges of a ground contacting region (a) on the tread surface in a standard loaded state in which the tire mounted on a regular rim R and inflated to a regular pressure is loaded with a regular load, and the 65% height points B are defined as the positions at 65% height HB of the tire section height H from the bead base b in a standard unloaded state in which the tire mounted on the regular rim and inflated to the regular pressure is kept free of load ($HB=0.65 H$).

More specifically, the region defined between the outer edge point A and the 65% height point B (herein after referred to as first region) does not contact with the ground in normal running, and this region is located near the ground contacting surface (a), therefore it is desired to decrease the thickness to lower the heat generation in order to enhance the high speed durability performance. Such arrangement also leads to a decrease in the vertical stiffness, thereby improving ride comfort and a steering performance. Accordingly, the minimum thickness position E should be formed between the outer edge point A and the 65% height point B. Further, the first region contacts with the road surface when running in a deflated state, and therefore from this viewpoint, too, it is evident that the increase of thickness of the first region does not contribute to the enhancement in the run-flat performance.

Thus, Applicant submits that KAJIKAWA discloses very specific thickness limits at different heights of the tire in order to improve run-flat performance and normal running performance.

In rejecting claim 7, the Examiner acknowledges that KAJIKAWA does not disclose a reinforcing profile with a crescent-shaped cross-section and does not disclose a core profile being enclosed in the at least one reinforcing profile. However, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to position the

soft rubber layers A1 and A3 over the entire surfaces of the core profile A2 and thus form a crescent-shaped profile that encloses the core profile. Applicant respectfully disagrees.

Applicant notes that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Further, Applicant notes that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Additionally, Applicant notes that if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Applicant submits that the Examiner's proposed modification of KAJIKAWA would render KAJIKAWA unsatisfactory for its intended purpose. That is, modifying KAJIKAWA in the manner asserted by the Examiner would require enlarging the soft rubber layers A1 and A3 over the entire surfaces of the core profile intermediate layer A2 or would require a decrease in the size of the intermediate layer A2. However, Applicant submits that doing either would alter the overall thickness of the KAJIKAWA tire at least in the regions of the soft rubber layers A1 and A3 and intermediate layer A2. Moreover, Applicant submits that altering the overall thickness of the KAJIKAWA tire in the regions of the soft rubber layers A1 and A3 and intermediate layer A2 would alter the specifically recited relative positions of the thick and thin portions of the KAJIKAWA tire. For example, if the soft rubber layers A1 and A3 are enlarged to cover the entire surfaces of the core profile intermediate layer A2, the minimum thickness of

the tire will not be at position E between the outer edge point A and the 65% height B and, thus decreasing the tire's high speed durability. That is, by increasing the thickness of layers A1 and A3, the overall thickness of the tire wall would be increased at least at the ends of the intermediate layer A2, which include position E. Thus, Applicant submits that modifying KAJIKAWA in the manner asserted would result in a tire wall, in which the minimum thickness would not be at position E between the outer edge point A and the 65% height B, which would render KAJIKAWA unsatisfactory for its intended purpose.

Moreover, Applicant submits decreasing the thickness of the intermediate layer A2 to accommodate enlarged soft rubber layers A1 and A3 would also render KAJIKAWA unsatisfactory for its intended purpose. That is, Applicant submits modifying KAJIKAWA by decreasing the size of the intermediate layer A2, would reduce the KAJIKAWA tire's ability to receive a large compressive strain in a deflated tire condition.

Thus, Applicant submits that modifying KAJIKAWA in the manner asserted would render KAJIKAWA unsatisfactory for its intended purpose. Thus, Applicant respectfully submits there is no suggestion or motivation to make the proposed modification.

Additionally, Applicant submits the proposed modification of the prior art would change the principle of operation of the prior art invention being modified. That is, modifying KAJIKAWA in the manner asserted would, as described above, alter the optimum distribution of the overall thickness of the sidewall portions, which KAJIKAWA regards as the point of the invention. That is, for example, modifying KAJIKAWA by increasing the thickness of the soft rubber layers A1 and A3, would alter the position of the minimum thickness of the tire wall, such that the minimum thickness is not at position E between the outer edge point A and the 65% height B. Moreover, by modifying KAJIKAWA such that the minimum thickness is not at

position E between the outer edge point A and the 65% height B, Applicant submits, changes the principle of operation of KAJIKAWA. Thus, Applicant respectfully submits the teachings of KAJIKAWA are not sufficient to render the claims *prima facie* obvious.

For at least these reasons, Applicants submit that one of ordinary skill in the art would not be motivated to modify KAJIKAWA in the manner asserted, and thus, KAJIKAWA does not render the present invention unpatentable.

Additionally, the Examiner asserts that Applicant has not provided a conclusive showing of unexpected results to a criticality for the claimed arrangement. Applicant respectfully disagrees. Applicant submits that the specification clearly sets forth a criticality for the claimed arrangement, for example, at least at paragraph [0006], which states:

The hard core profile encased by a softer mixture has the effect of a progressive spring – the stronger the deflection the stronger the resistance. Furthermore, the soft mixture protects the hard core from cracks and offers the added advantage of improving the driving comfort of the tire.

Thus, Applicant submits that the specification clearly sets forth a criticality for the claimed arrangement. Moreover, Applicant submits that they are not required to show criticality for the claimed arrangement through unexpected results. Therefore, Applicant submits that they have disclosed a criticality for the claimed arrangement.

Independent Claim 16

Applicant respectfully submits that the Examiner did not specifically address claim 16. That is, while claim 16 is indicated as rejected, the features of claim 16 are not addressed in the Office Action. Thus, as discussed further below, Applicant submits that the Examiner has not set forth a complete action.

In any event, Applicant respectfully submits that KAJIKAWA does not teach or suggest each of the features of independent claim 16. Claim 16 recites, in pertinent part:

. . . arranging at least one reinforcing profile, composed of a first elastomeric material and having a first crescent-shaped cross section, in a region of each side wall to extend respectively at least over a large part of a side wall length; and

enclosing a core profile, composed of a harder material than the first elastomeric material and having a second crescent-shaped cross section, in the at least one reinforcing profile.

For example, Applicant submits that KAJIKAWA at least does not teach or suggest enclosing a core profile, composed of a harder material than the first elastomeric material and having a second crescent-shaped cross section, in the at least one reinforcing profile. Rather, as discussed above with regard to claim 7 and shown in Figure 1 of KAJIKAWA, Applicant submits that KAJIKAWA discloses an intermediate layer A2 with two soft rubber layers A1 and A3 formed along portions of the intermediate layer A2 on each side of the intermediate layer A2. As such, Applicant submits that KAJIKAWA does not teach or suggest enclosing the core profile in at least one reinforcing profile.

Moreover, as discussed above with regard to claim 7, Applicant submits that it would not have been obvious to one of ordinary skill in the art to modify KAJIKAWA in the manner asserted, as the Examiner's modification of KAJIKAWA would both render KAJIKAWA unsatisfactory for its intended purpose and change the principle of operation of KAJIKAWA.

Thus, for at least these reasons, Applicant submits that KAJIKAWA does not teach or suggest each of the features of claim 16, and does not render the present invention unpatentable.

Dependent Claims 8 - 15

Applicant respectfully submits that claims 8 – 15 depend from an allowable independent claim, and are allowable based upon the allowability of the independent claim, and because these claims recite additional subject matter to further define the instant invention.

Claim 10

Claim 10 recites, in pertinent part:

. . . wherein the core profile extends up to 70% of an extent of the at least one reinforcing profile between the belt assembly and one of the bead areas

In addressing the rejection of claim 10, while tacitly acknowledging that KAJIKAWA does not disclose the recited feature, the Examiner asserts that one of ordinary skill in the art at the time of the invention would have found it obvious to form the reinforcement assembly of KAJIKAWA in accordance with the claimed invention, i.e., make the core profile smaller than the radial extension of the reinforcing profile. Applicant disagrees.

Specifically, for the reasons set forth above, with regard to claim 7, Applicant submits that KAJIKAWA explicitly teaches away from being modified in the manner asserted. That is, KAJIKAWA teaches that the core profile and reinforcing profiles are dimensioned and arranged to maintain a performance balance for the tire between a run-flat condition and a normal condition. More specifically, KAJIKAWA teaches that the core profile is used to support the tire in a run-flat condition. As such, Applicant submits that modifying KAJIKAWA in the manner asserted, by decreasing the size of the core profile would render KAJIKAWA unsatisfactory for its intended use of maintaining run-flat performance. As such, Applicant submits that there is no

suggestion or motivation to make the proposed modification and, thus, KAJIKAWA does not render claim 10 unpatentable.

Accordingly, for at least these reasons, Applicant respectfully requests that the rejection over claims 7 – 16 be withdrawn.

Complete Action not Provided

Applicant respectfully submits that the Examiner did not provide a complete action, and as such, Applicant requests that the next action not be a final action.

The Examiner is respectfully reminded of the guidance provided by 37 C.F.R. §

1.104(a)(1) regarding the Nature of Examination (emphasis added):

On taking up an application for examination . . . the examiner shall make a thorough study thereof and shall make a thorough investigation of the available prior art relating to the subject matter of the claimed invention. The examination shall be complete with respect to both compliance of the application . . . with the applicable statutes and rules and to the patentability of the invention as claimed, as well as with respect to matters of form, unless otherwise indicated.

Additionally, according to MPEP 706,

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible and at the same time to deal justly by both the applicant and the public, the invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all the grounds of rejection and objection.

Further, MPEP 706.07(a) notes:

Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure

statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p). ...

Furthermore, a second or any subsequent action on the merits in any application ... will not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17 (p), of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art.

As discussed above, Applicant submits that claim 16 was not addressed in the Office Action, and, as such, a clear issue was not developed between the Examiner and Applicant. Accordingly, Applicant respectfully requests that next Office Action not be a final action.

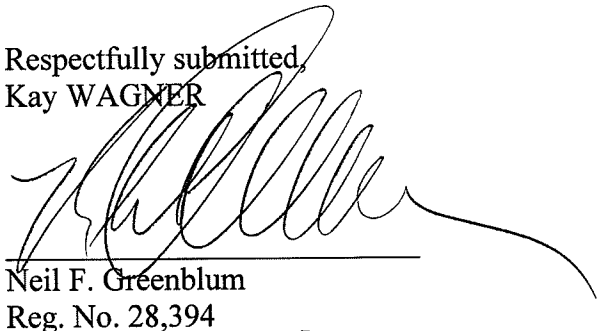
CONCLUSION

In view of the foregoing, it is submitted that the reference of record does not render obvious the Applicant's invention, as recited in claims 7 – 16. The applied reference of record has been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all of the claims therein are respectfully requested and now believed to be appropriate.

Authorization is hereby given to charge any fees necessary for the consideration of this amendment to deposit account No. 19-0089.

Respectfully submitted,
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